unavailability, the Commission can and should reasonably conclude that the element is available from non-ILEC sources and need not be unbundled.^{63/}

V. APPLYING THE TEST TO SPECIFIC ELEMENTS

If one applies the basic legal and economic principles outlined above to the market evidence from the past three years, it becomes clear that the Commission's new unbundling rules should be far more limited in scope than those the Commission adopted in 1996. The *UNE Fact Report* submitted by USTA shows in great detail that, as the CRTC and other international regulatory authorities have concluded, competitive entry into local exchange markets is generally not being impaired by the absence of mandatory access to ILEC network elements and CLECs have been consistently able and willing to provision their own network elements.

Before analyzing each network element in detail, however, it is useful to look more broadly at the market dynamics of competitive entry that have led to these developments. As explained in the attached report prepared by the consulting firm of de Fontenay, Savin & Kiss, the market imperatives of cost control and higher quality are driving CLECs to build their own network facilities and thereby gain an advantage over ILECs. Indeed, CLECs often are avoiding use of ILEC circuit-switched networks because CLECs have determined that packet-

Of course, ILECs must be given access to — and the opportunity to rebut — any data that CLECs provide to the Commission. If some of the data is confidential, CLECs should proffer it in a manner that reduces its commercial sensitivity, or the Commission should make it available to interested parties pursuant to a protective order. See generally Examination of Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission, GC Docket No. 96-55, 13 FCC Rcd 24816, 24843-45 ¶¶ 43-46 (1998); see also Westinghouse Electric Corp. v. United States Nuclear Regulatory Comm'n, 555 F.2d 82, 95 (3d Cir. 1977) (stating that party cannot submit confidential information in a rulemaking "under conditions which will in effect deprive other interested parties of the opportunity to challenge it before the agency or upon judicial review").

switched networks will form an important framework for the provision of both data and voice services.

In August 1998 — prior to and entirely independent of this Commission proceeding — de Fontenay, Savin & Kiss was retained by a large foreign telecommunications company to assess the opportunities for building the U.S. component of a global data services network. These consultants conducted extensive nationwide research regarding, *inter alia*, whether the consultants' foreign client could obtain access from CLEC, rather than ILEC, facilities in order to complete its service offerings. Moreover, this study *excluded* reliance upon any such facilities available from AT&T, MCI Worldcom, or Sprint.

After discussions with a variety of CLECs, the consultants advised their foreign client that it was both economically feasible and advisable to meet the client's North American objectives by utilizing exclusively the facilities of these new local carriers, with the exception of local loops. Indeed, ILEC facilities other than the local loop were of little relevance to the market entry of either existing CLECs or the consultants' foreign client. ILEC interoffice transport and switching, for example, generally were not needed for the competitive provision of telecommunications services. The de Fontenay Report explains at length that CLECs are choosing to invest in their own, higher quality facilities in hopes of gaining a strategic and competitive advantage over ILECs, especially as telecommunications markets shift from circuit-switched voice to packet-switched data services. These findings are fully consistent with many of the SEC filings of the CLECs themselves. As Electric Lightwave has boasted, for example, it "is not reliant on unbundled elements in its provision of services."

de Fontenay Report at 12-13 n.7.

Thus, the empirical evidence shows that competitive entry is not being impaired by a lack of access to ILEC facilities. Indeed, the \$11 billion that CLECs have invested in local exchange facilities since 1996 is a sign that market forces are starting to work, ⁶³ by spurring competition and the development of new telecommunications infrastructure. As explained in Parts I and II above, however, the Commission should be careful not to disrupt or hamper this investment by imposing unbundling regulations that would discourage investment by both ILECs and CLECs.

Turning now to specific network elements, we analyze in turn each of the elements that the *Local Competition Order* required to be unbundled, followed by an analysis of unbundling requirements for advanced services facilities.

A. Loops — The Commission Should Require Loop Unbundling Nationwide Except for High-Capacity Facilities.

Although ILEC loops have long been considered a natural monopoly to which any competitor would need access in order to provide local service, technological improvements are rapidly and undeniably undermining the universal application of that premise. Perhaps the strongest evidence is the thousands of miles of fiber that CLECs have laid directly to large and medium-sized business customers in urban areas. In the top 50 MSAs alone, CLECs have deployed nearly 30,000 miles of fiber, and CLECs have deployed fiber in all but 15 of the MSAs ranked between 51 and 150.66/ CLEC fiber reaches approximately 15 percent of all commercial

See ALTS Convention Notebook, Communications Daily, May 4, 1999 (citing ALTS President John Windhausen for the \$11 billion figure).

^{66/} UNE Fact Report at III-3.

office buildings in the country.⁶²⁷ Indeed, CLECs now serve between 9 and 18 percent of all business lines in "dense" wire centers (*i.e.*, wire centers serving 40,000 or more loops) in which they are collocated.⁶⁸⁷ This bypassing of ILEC loops is shown clearly by comparing the number of lines that CLECs serve with the number of loops CLECs have purchased from ILECs. By the end of April 1999, for example, CLECs had "ported" 292,578 telephone numbers from U S WEST switches, in addition to the thousands of other telephone numbers that CLECs have had assigned directly to them. As of May 8, 1999, however, CLECs had purchased only 14,857 unbundled loops from U S WEST. Thus, CLECs plainly have been able (and quite willing) to provide local exchange service without using ILEC loops.

The premise that loops are a natural monopoly also is being undermined in residential markets. Most prominently, AT&T's recent merger with TCI and its proposed buyout of MediaOne show that smart money is betting that cable telephony will be a viable way to reach customers in their homes. In these deals, AT&T has decided to invest \$90 billion and has promised the Commission that it will rapidly upgrade its newly-acquired cable plant to provide telephony. And, in the largest global bond offering in history, AT&T recently was able to raise \$8 billion from the capital markets in order to help finance that deployment. Market analysts estimate that the MediaOne merger, if approved, would give AT&T the ability to provide local

^{67/} *Id*.

Id. at III-16.

AT&T Closes \$8 Billion Global Bond Offering Sets Record, Business Wire 10:23:00, Mar. 26, 1999.

exchange service to *60 percent* of American households.^{20/} (By contrast, U S WEST currently reaches, at most, 10 percent of the nation's households.) Other major cable MSOs such as Time Warner and Comcast also are pursuing similar telephony strategies. Furthermore, fixed and mobile wireless systems are starting to be realistic alternatives to the local loop. Companies like WinStar, Nextlink and AT&T, for example, are investing heavily in relatively cheap, scalable, and easy-to-maintain fixed wireless technology.^{21/} And as mobile wireless prices continue to fall, mobile phones are already becoming a substitute for ILEC service for many customers.^{22/}

Despite this evidence that alternatives to ILEC loops are becoming competitively available, U S WEST recognizes that loops — at this time — meet section 251(d)(2)'s necessary and impair tests in most areas of the nation and that mandatory unbundling of loops therefore generally would be justified on a nationwide basis. The one exception to this rule should be ILEC high-capacity facilities running directly to customer premises. CLECs do *not* need unbundled access to these facilities. As noted above, CLECs have achieved remarkable market penetration in serving business and other high-volume customers by deploying their own fiber.

Doug Halonen & David Hatch, *Hearings on for AT&T*, Electronic Media, May 10, 1999, at 33.

See UNE Fact Report at III-10 to III-13.

Id. at III-22 to III-25.

We discuss below in Part V.B.7 whether unbundling should be required for the advanced electronics that increase the speed by which data can be transmitted over copper loops (e.g., DSLAMs). We do not address in these comments, however, the issues of subloop unbundling and frequency unbundling. Those complex issues are being addressed in the Commission's Advanced Services proceeding. See Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 13 FCC Rcd 24011, 24083-84, 24089-91 ¶¶ 162, 173-76 (1998).

In addition, CLECs already can and do serve such customers by obtaining ILEC private lines and special access interconnection pursuant to federal and state tariff. Indeed, competitive providers have used both their own fiber and resold services from U S WEST to capture a large share of the retail market for high-capacity services, ^{74/} and many states have found these services to be so competitive that they have deregulated them. Furthermore, the mandatory unbundling of the high-capacity facilities that underlie private line and special access interconnection would effectively give CLECs those entire services at prices lower than the regulated tariff rates. Such "unbundling" would promote regulatory arbitrage and serve no valid statutory or public purpose.

U S WEST therefore proposes that the Commission adopt a presumption that unbundling is not required for ILEC high-capacity facilities. More specifically, an ILEC presumptively should not have to unbundle transmission facilities that connect to end user premises and that operate at DS1 or higher transmission levels. This presumption would be only a narrow exception to the general loop unbundling requirement, and as noted above, CLECs could rebut the presumption with evidence that unique local conditions prevent deployment of high-capacity facilities to certain customers.

For the same reasons, it follows that the Commission should not broaden its definition of the loop element to include dark fiber. Dark fiber running to a customer's premises is nothing more than inactivated capacity on the high-capacity fiber loops discussed above, and CLECs can deploy dark fiber just as well as they can deploy lit fiber to high-volume

See generally Petition of U S WEST Communications, Inc. for Forbearance from Regulation as a Dominant Carrier in the Seattle, Washington MSA, CC Docket No. 99-1, Petition of U S WEST Communications, Inc. for Forbearance (filed Dec. 30, 1998).

customers.^{25/} CLECs therefore do not need access to dark fiber running to a customer's premises, and dark fiber does not satisfy meet the impair test.

Finally, the Commission should recognize that its loop unbundling rules should be modified as competitive alternatives to ILEC loops become available. If loop competition is not yet universally available, it also is not far away. The Commission therefore should consider automatic sunsetting mechanisms for loop unbundling, such as the five-year sunset that the CRTC imposed on its unbundling requirement for urban local loops in Canada in May 1997. The Commission also should be prepared to consider and act on future ILEC requests to modify the loop unbundling requirements as evidence grows that the need for local loops no longer impairs competitive entry.

B. Network Interface Devices (NIDs) — NIDs Should Be Unbundled as Part of the Loop Where ILECs Are Required To Unbundle Their Loops.

If NIDs are considered on a stand-alone basis, they do not pass the impair test.

Network interface devices (NIDs) are unquestionably available for purchase from numerous competitors, at low prices, and in any volume. Indeed, the Commission's current rules allow

See generally UNE Fact Report at II-26 to II-28.

Canadian Local Competition Decision ¶¶ 82-87. The unbundling requirement for urban loops will end on May 1, 2002.

See UNE Fact Report, III-29.

end users to supply their own NIDs for interconnection to the telephone network. Thus, ILECs do not have bottleneck control over NIDs, and CLEC can self-provision these devices.

Nonetheless, U S WEST recognizes that it is operationally efficient to have the same carrier provide both the local loop and the NID for a particular customer. Thus, loops should be defined to include the NID, with the result that ILECs would provide NIDs in conjunction with loops where they are required to unbundle their loops.

C. Operations Support Systems (OSS) — ILECs Should Be Required To Unbundle Only Certain OSS Functions Used To Provision Service pursuant to Sections 251(c)(3) and 251(c)(4).

U S WEST agrees that ILECs should be required to provide unbundled access to the five OSS functions identified in the *Local Competition Order*: pre-ordering, ordering, provisioning, maintenance and repair, and billing. However, ILECs should have to provide such access only if CLECs need those functions to obtain either (1) network elements that ILECs must unbundle pursuant to section 251(c)(3), or (2) services that ILECs must resell pursuant to section 251(c)(4). For example, although a CLEC may need an ILEC OSS function to provision or make efficient use of an ILEC's loops, the CLEC does not need that OSS function when the CLEC provisions its own loops or uses the loops of another CLEC. In those situations, CLECs can simply supply their own OSS. The available evidence shows that a competitive market has

Review of Sections 68.104 and 68.213 of the Commission's Rules Concerning Connection of Simple Inside Wiring to the Telephone Network and Petition for Modification of Section 68.213 of the Commission's Rules Filed by the Electronic Industries Association, CC Docket No. 88-57, Report and Order and Further Notice of Proposed Rulemaking, 5 FCC Rcd 4686, 4687 ¶ 5 (1990).

developed for customized OSS products and that CLECs can and do purchase these products from vendors such as Metasolv, Visionael, Remedy, Nortel, and Lucent. ^{79/}

D. Switching — The Commission Should Adopt a Presumption That Any ILEC Circuit Switch Within a 50-Mile Radius of One or More CLEC Circuit Switches (Or Packet Switch Providing Voice Services) Should Not Be Unbundled.

The market data for switching reveal a rather amazing fact: CLEC switches now serve more than one-third of BOC and GTE rate centers and can be expanded easily to serve many more. 80/ The fact that CLECs have been able to enter so many markets using non-ILEC switching — especially when considered in light of the broad geographic reach of these CLEC switches — shows that access to ILEC circuit switches is not a prerequisite to market entry in many, if not all, parts of the nation. 81/

As the *UNE Fact Report* explains in greater detail, CLECs are now provisioning their own circuit switches on a wider and wider scale. Before the 1996 Act eliminated local franchise monopolies, CLECs had deployed only 65 switches.^{82/} In the last three years, however, they have increased that number over eleven-fold, to 724.^{83/} The scope of CLEC coverage is particularly impressive in urban areas: In 25 of the largest 30 MSAs, CLEC switches serve 70

See de Fontenay Report at 42-45.

See UNE Fact Report at I-7.

US WEST deals in this section only with the unbundling of ILEC *circuit* switches. As discussed in the context of advanced services below, the Commission should adopt a rule that ILEC *packet* switches do not have to be unbundled, at least unless an ILEC replaces a circuit switch in its network with a packet switch and that packet switch is used to provide voice services.

See UNE Fact Report at I-1.

See id.

percent or more of all rate exchange areas. He in U S WEST's territory, for example, 100 percent of all the rate exchange areas in Denver are served by at least one CLEC switch; 80 percent are served by *four or more* switches. Similarly, in Seattle, all the rate exchange areas are served by at least one CLEC switch and nearly half are served by four or more CLEC switches. These figures, which are based on areas where CLECs have obtained NXX codes, do not even take into account rate exchange areas where CLECs can obtain ported ILEC numbers. As the *UNE Fact Report* explains, it is reasonable to infer that CLECs compete in all rate exchange areas served by an LNP-capable ILEC switch and, based on that inference, CLECs compete in 75 percent of all BOC and GTE rate exchange areas in the 50 largest MSAs.

The evidence is overwhelming that CLECs not only can enter a large number of markets by obtaining their own circuit switches but are in fact doing so, even with ILEC switching available at TELRIC prices. Just as significant is what CLECs are *not* choosing to do—relying on unbundled switching to provide service. In fact, in the three years since passage of the Telecommunications Act, *not one CLEC has purchased unbundled switching from U S WEST*. The increasing number of switches being deployed by CLECs—and the absence of any CLEC in U S WEST's territory using unbundled switching—demonstrate beyond doubt that lack of access to unbundled switching cannot be said to "preclude meaningful opportunities for competitive entry by an efficient competitor" in many, if not all, markets.

See id. at I-11.

^{85/} See id.

^{86/} See id.

See id. at I-21.

In light of these facts, the Commission should, at a minimum, establish a presumption that an ILEC circuit switch is not required to be unbundled if one or more CLEC circuit switches (or packet switches used in the provision of voice services) are within 50 miles of the ILEC switch. Any CLEC switch within 50 miles of an ILEC switch unquestionably can serve all the customers served by the ILEC switch by, for example, collocating a digital loop carrier (DLC) at the ILEC switch and using even low-powered regenerators. The CLEC Allegiance, for example, has adopted a so-called "smart-build" strategy under which it "installs its own switch in each market," leases ILEC loops, and "install[s], or physically locat[es] transmission equipment in [ILEC] central offices to route customer traffic through them to Allegiance's own switch."

Indeed, the 50 mile limit is highly conservative: While a DLC can be placed at least 50 miles from the CLEC switch with the lowest power regenerators, that limit can increase to as much as 160 miles with higher powered regenerators. Moreover, the geographic range of CLEC switches far exceeds the range of ILEC counterparts. As AT&T has noted, CLEC switches using DLCs can reach customers up to 125 miles away, while remote switching modules and other technologies extend the reach of modern switches to as much as 600 miles. 89/

The significance of the deployment of at least one CLEC switch within 50 miles of an ILEC switch is far more than the fact that the CLEC switch can serve the ILEC's customers. First, the deployment by one CLEC provides strong evidence that other CLECs could self-provision switching in the same area. Indeed, there is no reason to believe that another

Allegiance Telecom, Inc., Form S-1, at 19 (filed Mar. 19, 1999).

See UNE Fact Report at I-23 to I-24.

CLEC of comparable efficiency could not do so. And as long as self-provisioning is an economically viable alternative, the absence of compelled unbundling of the switch clearly does not preclude meaningful opportunities for competitive entry in that area. Second, the presence of one or more CLEC switches that can serve all the customers served by the ILEC switch provides new CLECs the opportunity to lease switching capacity on those CLEC switches (as well as from the ILEC on a voluntary basis). Accordingly, the absence of mandatory unbundling by the ILEC will have little, if any, effect. To be sure, a CLEC with its own switch may not be willing to unbundle if it is using most or all of its switching capacity for its own customers. But if all the switches in an area are operating at or near capacity, the demand for switching capacity is almost certainly high enough to make it economically feasible for an efficient entrant to provision its own switch.

Adopting this presumption is an extremely conservative approach given the factual evidence of the last three years. The reality is that, because of the geographic range of modern switches, even CLEC switches much farther than 50 miles from an ILEC switch provide actual competition to the ILEC switch. In addition, the presumption focuses only on CLEC circuit switches and packet switches actually being used to provide voice service. The fact of the matter, however, is that many, if not most, of the new switches being deployed are packet-switched. The most dramatic proof of this fact is the recent announcement by AT&T that it would stop procuring voice switches entirely by the end of this year. These packet switches, even if not currently being used to provide voice services, clearly could in many cases be used to provide the same services as ILEC circuit switches. Accordingly, the increasing presence of

Seth Schiesel, AT&T's Embrace of the New Technology Signals Next Era, N.Y. Times, Mar. 8, 1999, at B1

such packet switches provides further evidence that compelled access to an ILEC circuit switch does not meet the impair test.

Moreover, the presumption suggested here does not even begin to take account of the potential competition in the areas where no CLEC switch is within 50 miles of an ILEC switch. Self-provisioning is an economically viable option for virtually any reasonably efficient competitor in almost any region. Switches are provided by a number of major manufacturers, ^{91/} and prices have fallen dramatically on a per-line basis since 1986. Although switching exhibits some economies of scale, manufacturers are increasingly producing numerous switches designed for smaller and medium-sized carriers. ^{93/}

Ultimately, there is very little, if any, reason to believe that lack of access to switching as a UNE under section 251(c)(3) in any way precludes meaningful opportunities for entry by an efficient competitor in any market. But what is absolutely clear is that the absence of mandatory access to an ILEC switch that is within 50 miles of at least one CLEC circuit switch (or packet switch providing voice services) does not preclude or even hamper the ability of a competitor to provide service. Accordingly, the Commission should at least adopt a presumption that switching does not have to be unbundled in those cases.

See UNE Fact Report at I-28.

^{92/} See id.

See id. at I-28 to I-29.

E. Signaling Networks and Call-Related Databases — The Commission Should Require ILECs To Unbundle Signaling Only for Those CLECs That Obtain Switching from ILECs.

Each ILEC switch is associated with only one signaling network. 94/ Thus, if a CLEC uses an ILEC switch, the CLEC must use the ILEC's signaling network as well. For this reason, U S WEST recognizes that, to the extent the Commission requires ILECs to unbundle their switches, the ILECs also must unbundle their signaling and call-related databases.

If, however, a CLEC uses its own switching, there is no reason to force an ILEC to provide unbundled access to its signaling network. The equipment that a CLEC needs to establish its own signaling network is available on a competitive basis from multiple vendors. 95/ and according to the Local Exchange Routing Guide, at least six CLECs have actually deployed signal transfer points ("STPs") to provide their own signaling. ⁹⁶ Furthermore, a carrier's signaling network can achieve a nationwide footprint by deploying STPs in only a handful of locations. 927/ Moreover, CLECs also have the option of obtaining signaling services from wholesale providers. 28/ As the Commission itself has recognized, CLECs have access to multiple wholesale sources for signaling. 99/ Based on this evidence that CLECs can and do provide their

94/

See id. at V-1. 95/ See id. at V-5. 96/ See id. at V-2 to V-3. 97/ See id. at V-1.

^{98/} See id. at V-2.

Application of WorldCom, Inc. and MCI Communications Corp. for Transfer of Control of MCI Communications Corp. to WorldCom Inc., CC Docket No. 97-211, Memorandum Opinion and Order, 13 FCC Rcd 18025, 18061 ¶ 60 (1998) ("We disagree with GTE's claim that the new firms [e.g., Qwest, IXC Williams, Level 3] will be unable to deploy (continued...)

own signaling and that signaling also is competitively available on a wholesale basis, there is no reason for the Commission to require ILECs to provide signaling to CLECs that use their own switches.

F. Interoffice Transmission Facilities — The Commission Should Adopt a Presumption That ILECs Do Not Have To Unbundle Interoffice Transmission Facilities to or from Wire Centers That Both (a) Serve 20,000 or More Loops, and (b) Have One or More Collocated CLECs.

Like switching, interoffice transmission facilities are widely available on a competitive basis and should be subject to only limited, if any, unbundling requirements. The so-called "fiber optic revolution" has led to an explosion of new fiber installation throughout the nation by non-ILECs, and other companies have developed substantial transmission networks using fixed wireless links. The availability of these new means of interoffice transmission demonstrate that CLECs do not need ILEC interoffice facilities in order to provide local exchange service. Indeed, CLECs generally are competing without using unbundled ILEC interoffice transport except in very limited instances.

Since at least the early 1980s, interoffice transmission facilities have not been a natural monopoly, and the market for such transport has been open to competition. During the Bell divestiture proceedings, for example, MCI insisted that competition was possible in facilities all the way down to the smallest Class 5 switch — meaning that the short-distance market served by the Commission's interoffice transmission UNE apparently was subject to

^{(...}continued) signaling equipment for years. Applicants identify several companies, including Transaction Network Services, Inc., GTE Intelligent Network Services, and SNET, that provide wholesale SS7 signaling services."); see also de Fontenay Report at 42 n. 45 (ICG).

U S WEST refers here only to transport facilities as unbundled network elements, not to *interconnection* facilities used to provide interconnection pursuant to section 251(c)(2).

facilities-based competition even back in 1984.¹⁰¹⁷ This market has rapidly become even more competitive since divestiture, particularly since the 1996 Act. Sixty CLECs have constructed fiber networks since 1996, ¹⁰²⁷ and total CLEC fiber deployment already includes over 50,000 route miles serving over 250 cities. ¹⁰³⁷ Indeed, CLECs have already deployed nearly 30,000 miles of fiber in the top 50 MSAs alone. ¹⁰⁴⁷ Forty seven of those 50 MSAs are served by at least three CLEC fiber networks, and at least one CLEC has deployed fiber in 85 of the 100 MSAs ranked between 51 and 150 in population. ¹⁰⁵⁷ Furthermore, prices have fallen substantially as bandwidth has become a commodity that can be purchased from a variety of sources. Many CLECs, for example, now purchase capacity on other CLEC fiber networks, ¹⁰⁶⁷ and, according to one recent report, "the wholesale spot price of bandwidth is down 35% [since June 1998], thanks to ample supply." ¹⁰²⁷ In addition, the deployment of fixed wireless transmission links by CLECs large and small — from WinStar and Teligent to AT&T and Sprint — has added even more competitive pressure in the market for interoffice transport. ¹⁰⁸⁷

See UNE Fact Report at II-2, II-21. The Department of Justice ultimately decided, for other reasons, to keep this short-distance transport within the BOCs'—rather than the IXCs'—line of business.

^{102/} See id. at II-6.

See id. at II-5, II-6.

^{104/} See id. at II-6.

^{105/} Id.

^{106/} See id. at II-5.

Toni Mack, Fiber Frenzy: Betting on Bandwidth, Forbes, Apr. 19, 1999, at 252.

See UNE Fact Report at II-16 to II-17.

With this ample evidence of CLEC deployment, it should be clear that the unbundling of ILEC interoffice transmission facilities is not required on a nationwide basis. CLECs seem to have little trouble entering the market using their own fiber networks, and the ample supply of capacity is making it possible for new CLECs to purchase capacity from existing CLECs at competitive prices. The Commission therefore should, at a minimum, not require ILECs to unbundle their interoffice transmission facilities in areas where competitive alternatives are available for interoffice transport.

To determine precisely where unbundling should and should not be required, the Commission unfortunately cannot rely on comprehensive, nationwide records of CLEC fiber deployment because no such records exist. The Commission, however, does have access to market data that would allow it to develop quite reliable proxies about where such fiber is available. Three major ILECs — Bell Atlantic, SBC, and U S WEST — compile quite detailed information about CLECs fiber deployment in their regions. According to this data, CLEC fiber is very likely to be found in "dense" wire centers where at least one CLEC has obtained collocation. Indeed, the data compiled by U S WEST show that competitive fiber is available in at least 74 percent of its wire centers that have (1) more than 20,000 loops, and (2) at least one collocated CLEC. In Bell Atlantic's and SBC's regions, the comparable figures are 72 percent and 90 percent, respectively. The correlation becomes slightly better by analyzing wire centers with even more loops. Considering only those wire centers with more than 40,000 loops and at least one collocated CLEC, competitive fiber is deployed in at least 77 percent of these

See UNE Fact Report at II-8.

^{110/} See id.

wire centers in U S WEST's region, 80 percent in Bell Atlantic's region, and 92 percent in SBC's region. 1111/

Because competitive fiber is so likely to be found in dense wire centers with collocation, the Commission should establish a presumption that unbundling is not required for interoffice facilities running to or from such wire centers. At a minimum, the Commission should adopt a presumption that unbundling is not mandatory in wire centers that have more than 40,000 loops and at least one collocated CLEC. As explained above, however, CLEC fiber is almost as likely to be found in wire centers with 20,000 loops as it is in wire centers with 40,000 loops. Thus, the Commission should go further and adopt a presumption unbundling is not required in wire centers with more than 20,000 loops and at least one collated CLEC. Even this presumption would provide quite limited relief to ILECs: In U S WEST's region, for example, this presumption would eliminate unbundling requirements in only 16 percent of wire centers, 112/ and the unbundling relief would occur primarily in large metropolitan areas in the region, such as Denver, Seattle, and Phoenix.

The Commission should adopt such a presumption even though the proxies suggest that there are some dense wire centers with collocation that do *not* have CLEC fiber. First, the proxies are too conservative and *underestimate* the true availability of competitive transport. For example, the ILECs' fiber maps do not show all CLEC and third-party fiber, and the proxies also do not reflect the availability of any *non-fiber* interoffice transport, such as

See id.

112/ See id.

wireless links. 1137 Second, the fact that competitive fiber is so widely available in dense wire centers with collocation strongly indicates that it is economically feasible for CLECs to deploy such fiber in all such markets. Accordingly, the absence of compelled unbundling of transport does not preclude meaningful opportunities for an efficient competitor to enter such markets. Third, even if for some reason it were not economically feasible in some dense wire centers with collocation to deploy fiber or obtain it from non-ILEC sources, CLECs could rebut the presumption for those wire centers. If, for example, a wire center in Des Moines fit within the presumption but lacked competitive transport alternatives and it was not feasible for an efficient competitor to deploy transport facilities, a CLEC could present such evidence to the Iowa state PUC in order to request access to the ILEC's interoffice facilities.

More broadly, the Commission should consider adopting a uniform rule eliminating mandatory unbundling requirements *nationwide*, even where there is not yet direct evidence of competitive transport. As explained in Part II above, evidence of competitive entry is a sufficient — but not a necessary — condition for the elimination of unbundling requirements. Indeed, the economics of competitive fiber suggests that non-ILEC transport is a competitive alternative in all areas where a CLEC would want to compete (*i.e.*, all areas where regulatory subsidies have not made competition uneconomical). For example, interoffice transmission facilities are scalable, and CLECs can easily sell their excess capacity to other carriers. Also, the materials and technical know-how required to construct a fiber or wireless network are available to CLECs and other parties on a competitive basis. Moreover, CLECs have the option, entirely independent of the Act's unbundling requirements, of addressing their

^{113/} See id. at II-16.

transmission needs by buying private lines from ILECs pursuant to applicable tariffs. Indeed, many states have declared private line services to be competitive. In sum, unless and until CLECs identify how ILEC market power or some other market failure is preventing them from self-provisioning or otherwise obtaining interoffice transport on economically viable terms, the Commission should not impose any unbundling requirements on ILEC interoffice facilities.

Shared Transport. To the extent that the Commission does in some instances require an ILEC to provide unbundled access to interoffice facilities, the requirement should be no broader than necessary to create a meaningful opportunity for efficient CLECs to compete. In particular, access to what the Commission called "shared transport" in the Third Order on Reconsideration in this docket does not meet the impairment test. In the case where a CLEC obtains switching from a source other than the ILEC, obtaining shared transport will be impossible since the provision of shared transport requires both ILEC switching and transport. This result is fully consistent with the Commission's prior ruling that "incumbent LECs must offer only *dedicated transport*, and not shared transport, between their switches, or serving wire centers, and requesting carriers' switches."

Even in the case where CLECs obtain switching from the ILEC, there would be no basis for giving CLECs a broad right of access to an ILEC's entire interoffice transport network as an undifferentiated whole. Rather, any mandatory right of access should be limited to

See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, Third Order on Reconsideration and Further Notice of Proposed Rulemaking, 12 FCC Rcd 12460 (1997) ("Shared Transport Order").

^{115/} Id. at 12482 ¶ 36.

Id. at $12461-62 \ \ 2$.

the specific, individual transmission links that the requesting CLEC identifies with particularity; such access would be more than sufficient to allow an efficient CLEC to obtain the transport functions that it needs to offer local service. Any attempt to compel access to shared transport on the ground that shared transport is more convenient or less costly for a CLEC because it is a combination of facilities is unjustified. Of course, an ILEC and CLEC would be free to negotiate an arrangement for blanket access to the ILEC's entire interoffice network (*i.e.*, shared transport), but the Commission should not require such an arrangement or set its terms.

Dark Fiber. Nor should the Commission unnecessarily broaden any interoffice transport unbundling obligation it might adopt by expanding the definition of "transport" to include dark fiber. Whatever justification there may be for allowing CLECs to take advantage of an ILEC's preexisting transport network by purchasing unbundled access to the ILEC's existing, operational transport facilities, that justification simply cannot extend to dark fiber — unused, inactivated transmission facilities held in reserve for future use. Simply put, there is no conceivable basis for concluding that ILECs have some advantage vis-à-vis CLECs with respect to dark fiber. As discussed above, fiber has become a commodity that can and is being deployed by numerous CLECs and for which there is a vigorous wholesale market. Of course, CLECs have the ability to lay their own fiber and have the right to obtain access to all necessary rights of way from the incumbent. Accordingly, lack of access to an ILEC's dark fiber would be no barrier to the ability of an efficient CLEC to participate in market for local telecommunications services, and the Commission should not require unbundling of dark fiber.

G. Operator and Directory Assistance Services — The Commission Should Not Require Unbundling of Operator and Directory Assistance Services.

The Commission should not impose any unbundling requirements for operator and directory assistance services. First, ILECs have no market power or advantage over CLECs in the provision of these services. A CLEC needs essentially two inputs in order to self-provision operator and directory assistance services — databases and computers. Both of these inputs are competitively available to CLECs. Section 251(b) of the Act and Rule 51.217 of the Commission's rules require LECs to provide other LECs with nondiscriminatory access to their directory listings. And, as the *UNE Fact Report* establishes, the hardware and software components necessary for operator and directory assistance service are competitively available from multiple vendors. Furthermore, there is no reason to believe that economies of scale prevent CLECs from providing operator and directory assistance services. Indeed, CLECs can provide these services from a single nationwide center. Thus, CLECs cannot point to any market failure or monopoly power that prevents them from providing their own operator and directory assistance services.

Second, the empirical evidence of actual market entry shows conclusively that it is possible to provide operator and directory assistance services without unbundled access to an ILEC's equivalent services. There are literally dozens of providers of retail directory assistance that do not use an ILEC UNE — from interexchange carriers such AT&T to Internet websites

See 47 U.S.C. § 251(b)(3); 47 C.F.R. § 51.217(c)(3)(ii).

See UNE Fact Report at IV-10.

such as Bigfoot.^{119/} Among CLECs, some such as MCI WorldCom and McLeod self-provision their own operator and directory assistance services, while others such as ALLTEL, GST, Cox, WinStar, and Omnipoint apparently have found it more advantageous to purchase these services from one of many wholesale providers.^{120/} The *UNE Fact Report* shows that there are at least six such wholesale providers, including Excell, Frontier, HebCom, InfoNXX, Metro One, and Teltrust.^{121/} Based on this substantial evidence of competitive market entry, the Commission need not require ILECs to unbundle their operator and directory assistance services anywhere in the nation.

H. Advanced Services — The Commission Should Not Impose Any Unbundling Obligations for Facilities Used Solely in the Provision of Advanced Services.

U S WEST does not agree with (and is currently challenging in court) the Commission's determination that the unbundling obligations of section 251(c) apply to advanced services (*i.e.*, high-speed data services as defined in section 706 of the 1996 Act, including but not limited to DSL, ATM, and frame relay services). As U S WEST has explained before,

See id. at IV-1 to IV-6; see also Petition of US WEST Communications, Inc. for Competitive Classification of its Directory Assistance Services, Docket UT-990259, Order Granting Petition (Wash. Utils. and Transp. Comm'n Apr. 28, 1999) (declaring that ILEC's provision of directory assistance services was subject to effective competition because consumers could choose among 70 alternative providers of such service).

See UNE Fact Report at IV-2, IV-5.

^{121/} See id. at IV-5.

Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 13 FCC Rcd 24011 (1998); appeal docketed, US WEST Communications, Inc. v. FCC, No. 98-1410 (D.C. Cir.).

these new services are exempt from section 251(c)(3) because they are neither telephone exchange nor exchange access service.

Assuming for the sake of argument that section 251(c) does apply, the facilities used by ILECs solely to provision advanced services do not meet the necessary and impair standard and therefore should not be subject to mandatory unbundling. CLECs have unfettered access to the inputs needed to provide advanced services, and "incumbent" LECs start off with no residual monopoly power — or even a headstart — in the provision of these new services. With the advanced services market so open to competition and with the market evidence showing that CLECs are already in the forefront in the provision of these services, mandatory unbundling requirements would only harm competition and consumer welfare. The 1996 Act requires the Commission to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans." 47 U.S.C. § 157 note. In light of this mandate, the Commission should be careful not to dampen ILEC and CLEC investment incentives in this emerging market, yet that is precisely what mandatory unbundling of advanced services facilities would do.

Consider, for example, DSL services. A CLEC needs four basic inputs to provide these services — a conditioned loop, collocation, a Digital Subscriber Line Multiplexer ("DSLAM"), and a fast-packet or ATM switch. As explained above, U S WEST does not challenge basic unbundling requirements for the local loop, except for high-capacity facilities. Furthermore, the Commission's existing (and recently strengthened) collocation rules guarantee a CLEC's ability to place its equipment on ILEC premises. 123/

See generally Deployment of Wireline Services Offering Advanced (continued...)

The other necessary inputs for DSL services — DSLAMs and packet switches — are freely available at market prices from sources other than incumbent LECs, which have no bottleneck control over such items. Multiple major vendors supply DSL equipment, ^{124/} and U S WEST itself buys its DSL equipment from outside suppliers. As Commissioner Ness has noted, "[t]he evolving DSL equipment necessary to carry high-speed digital signals on properly conditioned local loops is available to both the ILECs and the CLECs. So is the associated multiplexing and routing/switching equipment necessary to create advanced high-speed data communications services." Furthermore, DSL equipment generally is scalable, allowing CLECs to provision such equipment in small quantities without suffering from any significant cost disadvantage. DSLAMs, for example, require only a small initial investment and can be purchased at nearly constant per-unit costs. Finally, ILECs have no residual advantage or headstart whatsoever in the deployment of these facilities: CLECs and ILECs are entering these markets at the same time and starting with the same zero market share.

Several new entrants have acknowledged that they have no difficulty obtaining the electronics they need to provide advanced services. MCI, for example, has argued:

CLECs can efficiently provide DSL technologies as sufficiently as US WEST and other BOCs. . . . A CLEC can place the DSLAM in a collocated space in the BOC's CO just as readily as the BOC can

^{(...}continued)

Telecommunications Capability, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48, ¶¶ 18-60 (rel. Mar. 31, 1999).

See UNE Fact Report at VI-26 to VI-27.

Speech by Commissioner Ness before the Computer and Communications Industry Association's 1998 Washington Caucus, Washington, D.C, June 9, 1998 (*available at* http://www.fcc.gov/Speeches/Ness/spsn812.html, *visited* May 24, 1999).

place the DSLAM in its own CO. Upfront investment costs to the provider are low. 126/

Similarly, Covad CEO Charles McMinn has confirmed that new entrants do not need unbundled access to nonbottleneck advanced services facilities:

We are happy if they [the incumbent LECs] don't provide any of the electronics, let us put our own electronics in place, and charge us an appropriately low charge just for the copper line. . . .

Some members of ALTS... would go a little bit further and say that when an ILEC deploys DSL services in a central office, the ILEC must provide the CLEC with access to it... We're not insisting on that. 127/

The most important evidence, however, that advanced services facilities are not needed from ILECs is the market data showing widespread deployment and competition in the advanced services market. As the *UNE Fact Report* makes clear, facilities-based CLECs have formed strategic partnerships with major equipment manufacturers and investors and have deployed DSL equipment on a startling scale. These new competitors — many of which have existed only for a few years — now have more DSL equipment deployed and provide DSL service in more cities than ILECs do. 129/ Furthermore, the same scale of competition is evident in other advanced services such as ATM and frame relay: In these markets, Sprint, MCI and AT&T are among the leading providers. Thus, it would defy all common sense and the market evidence

Petition of US WEST Communications, Inc. For Relief from Barriers to Deployment of Advanced Telecommunications Services, CC Docket No. 98-26, Opposition of MCI Telecom. Corp., at 10 n.3 (filed Apr. 6, 1998).

On the Record: Covad CEO Aims To Make DSL As Pervasive As Current Modems, Telecom. Reports, at 44 (June 1, 1998).

See UNE Fact Report at VI-19 to VI-24.

^{129/} See Id. at VI-22.

to conclude that ILECs dominate advanced services markets and that access to ILEC facilities is required for competitive entry.

Finally, any Commission decision about the unbundling of advanced services facilities cannot ignore the dampening effect that mandatory unbundling would have on the incentives of both CLECs and ILECs to invest and innovate in advanced services technologies, particularly in rural and other high-cost areas. At least if left unfettered by regulation, most investment and innovations by carriers in the foreseeable future is likely to occur in the development and deployment of advanced services. Both Congress — through section 706 and the Commission have made clear that the roll out of such advanced services is strongly in the public interest. Yet, if ILECs are forced to unbundle their new investments and proprietary innovations, they unquestionably will have less incentive to engage in such investments. As AT&T's chief executive officer has put it, "No company will invest billions of dollars . . . if competitors which have not invested a penny of capital nor taken an ounce of risk can come along and get a free ride in the investments and risks of others." Conversely, if CLECs know they can rely on ILEC investments and innovations, they will have diminished incentives to take on the expense and risks associated with such investments. The Commission should be especially sensitive to this effect on incentives in considering the unbundling of advanced services facilities, or its regulations will discourage the roll-out of those services and the development of competition, particularly in rural and other high-cost areas.

Speech by C. Michael Armstrong before the Washington Metropolitan Cable Club, Washington, D.C., Nov. 2, 1998 (available at http://www.att.com/speeches/98/981102.maa.html, visited May 25, 1999).

The imposition of regulatory unbundling obligations on ILECs will particularly discourage investment and innovation in light of the fact that dominant cable providers such as AT&T are rapidly investing in cable modem and related technologies, unfettered by any requirement that they share their facilities with others. ILECs will be doubly reluctant to invest in advanced services facilities if they both have to share those investments with CLEC competitors and simultaneously have to compete with dominant cable providers who are not subject to such regulation.

VI. THE COMMISSION SHOULD EMPLOY A VARIETY OF TOOLS TO ENSURE THAT ITS UNBUNDLING REQUIREMENTS WILL BE MODIFIED OVER TIME TO REFLECT RAPIDLY CHANGING MARKET AND TECHNOLOGICAL CONDITIONS.

It is undisputed that the telecommunications industry of today will be vastly different tomorrow. Indeed, the pace of change has become exponential. Products that were virtually unheard of five years ago now are attracting billions of dollars of capital investment, and competitors are racing to be the first to market with new services and with old services provided through new technologies. The extraordinary level of CLEC investment since the 1996 Act has created a laboratory in which countless new business plans and network designs are being developed and brought to market. New technologies such as fixed wireless and cable telephony, for example, are already changing assumptions about whether ILEC local loops are natural monopolies. Indeed, Commissioner Powell and many industry analysts have stated a

See generally Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, CC Docket No. 98-146, Report, FCC 99-5, ¶¶ 53-58 (rel. Feb. 2, 1999).

firm belief that innovations will "make it feasible [for CLECs] to avoid incumbent facilities, including the venerable 'last mile." 132/

In this dynamic market context, the Commission's unbundling rules cannot remain static. As discussed above, the sharing obligations imposed by section 251(c) entail significant competitive costs. Section 251(d)(2) therefore provides that unbundling requirements will be imposed only where they are truly needed — namely, where residual market power from years of franchised local exchange monopolies effectively precludes competitive entry by an efficient CLEC. Whether and to what extent new entrants are precluded depends — and will continue to depend — on technology and market conditions. No one can predict precisely how markets and technology will evolve, but the *UNE Fact Report* demonstrates that new innovations almost certainly will make entry without access to ILEC elements substantially easier over time. Maintaining unchanged unbundling requirements in the face of such innovations would violate section 251(d)(2) and serve no purpose other than to distort market incentives.

In this proceeding, therefore, the Commission should affirmatively state that its unbundling requirements will terminate when an element no longer meets the necessary and impair standards. The Commission also should establish procedures and mechanisms to ensure that the requirements are modified without unnecessary delay or regulatory proceedings.

Modifying its unbundling requirements would not require the Commission to forbear from enforcing section 251(c). Quite the contrary. The modification of unbundling requirements

Speech by Commissioner Powell before the Association for Local Telecommunications Services, Las Vegas, Nevada, Dec. 2, 1998 (available at http://www.fcc.gov/Speeches/Powell/spmkp819.html, visited May 12, 1999).

See 47 U.S.C. § 160(d).

— whether by automatic sunsetting mechanisms or through direct Commission order — is required by section 251 as market and technological conditions change. Section 251(d)(2) mandates that the Commission enforce section 251(c) by requiring unbundling only for those elements that satisfy the necessary and impair tests. When the Commission orders such elements to be unbundled, it is *enforcing* section 251. Similarly, the Commission also is enforcing section 251 when it removes an unbundling requirement because an element no longer meets the section 251(d)(2) criteria. Modifying unbundling requirements does not constitute "forbearance" any more than a decision now not to unbundle an element pursuant to the Court's mandate constitutes forbearance. 134/

Presumptions. The primary means for adjusting the Commission's unbundling requirements should be the presumption system outlined above. Rulemaking proceedings inevitably take time and require both the government and private parties to expend significant resources. However, by using presumptions based on objective market criteria as discussed above in Part III, the Commission could save those resources and speed the deregulatory process. Such presumptions not only would give states a limited flexibility to adjust unbundling requirements in response to specific local market conditions, they also would *automatically* adjust regulatory obligations as market conditions change. If, for example, the Commission

As another example of the principle that regulatory obligations may change as market conditions change, consider the Commission's reclassification of AT&T as a nondominant carrier in 1995. See Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier, Order, 11 FCC Rcd 3271 (1995). That action removed AT&T from the scope of certain obligations under section 214 of the Act, see id. at 3281 ¶ 12, but no one claims that the Commission was forbearing from the enforcement of section 214. (Indeed, the Commission did not even have forbearance authority until section 10 was added to the Act in 1996.) The modification of AT&T's section 214 obligations was — like the modification of unbundling obligations discussed above — simply the effect of the Commission enforcing the Act under new market conditions.

adopts a presumption that switches must be unbundled only in rate centers that are not within 50 miles of a CLEC switch, the deployment of the first CLEC switch within that radius would cause the unbundling presumption to change automatically, without the intervention of the Commission. The procompetitive purposes of section 251(d)(2) should not be defeated by regulatory delay, and a presumption-based unbundling regime guarantees that regulations will be eliminated as soon as competitive conditions warrant.

Petitions. ILECs also should be free to petition the Commission to modify its unbundling obligations to reflect new technological and market conditions. The Commission should consider such petitions on an expedited basis, especially if it has adopted uniform unbundling rules rather than presumptions based on objective market criteria. As noted, such a presumption-based system has a built-in capacity to calibrate unbundling requirements to current conditions. By contrast, uniform unbundling requirements have no means of adjusting to the ongoing, rapid changes in the telecommunications industry short of direct Commission action. Thus, to be faithful to the limiting standard contained in section 251(d)(2), the Commission should commit sufficient resources to ensure prompt action on petitions requesting modification of unbundling rules. In such proceedings, a petitioning ILEC and its supporters would have the burden of making a prima facie case that technological and market changes have made inapplicable the Commission's original rationale for its unbundling rule (or presumption). CLECs then would have the burden of rebutting that showing with relevant market evidence, to which, as discussed above in Part III, they have the best access. If the CLECs fail to present such evidence, the unbundling requirement would be lifted or modified as appropriate. 135/

ILECs should be allowed to make such a petition after the implementation of the (continued...)

Periodic Review. Furthermore, the Commission should, on its own motion, systematically reconsider its unbundling regime every eighteen months to ensure that its underlying assumptions still hold true. Such comprehensive Commission proceedings would allow the Commission to review the broader changes in telecommunication markets better than it presumably could in proceedings based on narrower, individual petitions regarding unbundling requirements.

of unbundling requirements could be accomplished without any harmful market disruptions because the Commission is free to adopt mechanisms to ease the transition to new unbundling rules. For example, if and when an unbundling requirement is modified — either by a change in a presumption's application or by direct Commission action — the Commission could require ILECs to grandfather existing unbundled elements subject to that requirement for one year under any interconnection agreements then in force. Such a procedure would not disrupt existing CLEC operations and would give a CLEC a reasonable period of time to provide its own elements or to negotiate with the ILEC for a *voluntary* unbundling agreement. However, after an unbundling requirement has been modified, CLECs would not be allowed to demand any new installations of the element at TELRIC prices, and *new* interconnection agreements would not be subject to the old unbundling requirement. Furthermore, competitors should no longer be

^{(...}continued)

Commission's new unbundling rules and without regard to the section 271 process. As discussed above in Part II, the unbundling obligations of sections 251 and 271 are logically independent.

A one-year period would give CLECs a full construction season in which to deploy their own facilities, many of which require far less time to deploy. *See, e.g., UNE Fact Report* at I-29 to I-30 (citing evidence that CLECs can deploy switches in less than 7 months).

allowed to invoke the pick-and-choose rule regarding that element. Without this limitation, old unbundling requirements could live on indefinitely, as one CLEC could demand unbundling terms from agreements reached under the old unbundling rules, and that new agreement would form the basis for further CLEC demands in the future, and so forth.

CONCLUSION

The Commission should adopt the principles, presumptions, and other mechanisms described above to implement section 251(d)(2) of the 1996 Act. Submitted as an attachment hereto is the text of proposed rules designed to embody these mechanisms.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on the 26th day of May 1999 I caused true copies of the foregoing Comments of U S WEST Communications, Inc. to be served by first class mail, postage pre-paid upon the following:

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